THE TEXTILE ASSOCIATION (INDIA)
A.T.A. PART II – EXAMINATION PAPER 2019
PRINCIPLES OF FABRIC MANUFACTURE- A2.2

Date: 22-12-2019
Marks: 100
Time: 2.00 P.M. to 5.00 P.M.

Instructions:
1. Attempt any SIX Questions out of which Q.1 is compulsory
2. Answer each next main question on a new page
3. Figures to the right hand side indicates full marks
4. Illustrate your answers with sketches and flow charts wherever necessary
5. Use of non-programmable electronic pocket calculator permissible
6. Mobile and any other Communication Devices and Books etc. are not allowed in exam hall
7. Assume suitable data wherever necessary

Q. 1: a) Mark the statement with True or False.

i) Sizing Process increases the weaveability of yarn  
ii) Let off mechanism is a part of winding machine
iii) Sizing Cylinders are coated with Teflon coating
iv) Individual warp ends are controlled by healds in shedding mechanism
v) Ball formation on yarn is caused on sizing machine

5

b) Match the following:

i) Back Rest     a) Reed Count
ii) Traverse Drum b) Autoconer
iii) Maize Starch c) Weaving
iv) Stock Port System d) Winding
v) Splicing Device e) Sizing Ingredient

5

c) Filling in the blank

i) In super high speed warping machine, ______________ type of creel is used.
ii) Dobby mechanism is installed on ______________.
iii) PLC (Programmable Logic Controller) is installed on ______________ machine.
iv) Fly Shuttle is used on ______________.
v) 44 Tex = ______________ Ne.

10

Q. 2: a) Describe the functions of Multiple Box Motion.

b) The length of yarn wound in 10 min. on a winding machine is 4800 meters, if the diameter of the winding drum is 101.6 mm, calculate the rpm of the winding drum.

8

Q. 3: a) Describe the various sizing ingredients used in Sizing with their purpose.

b) Describe the working principle of latest Autoconer Warp Winding Machine.

8

Q. 4: a) Describe the modern developments & features of sizing machine.

8
b) Describe the working principle of latest Shuttleless looms.

Q. 5: a) Describe with the line diagram the passage of yarn on Direct Warping Machine.

b) Calculate the Avg. Count of 60s, 40s, 34s and 16s Cotton Yarn.

Q. 6: a) Calculate the approximate length of sized yarn on weaver's Beamin Meters, if count of warp is 30 Ne & total ends are 8640 weighing 390 kg.

b) Describe the Under-Pick Mechanism with suitable line diagram.

Q. 7: Draw the following designs with draft & peg plan (Use graph paper):

i) 3/3 Twill

ii) Ordinary Honeycomb

iii) Huckaback Weaves

iv) Mockleno Weaves on 8 Ends

Q. 8: Write short note on the following:

a) What are the reasons of low size pick up in Sizing?

b) Various Temples used on Looms.

c) Yarn Numbering System

d) Drop Box Mechanism

***************